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The influence of instructional leadership of school administrators on school effectiveness.

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Abstract

The purposes of the study were 1) to validate the fitness of structural equation model of instructional leadership affecting school effectiveness with empirical data; 2) to study direct, indirect, and total effect of instructional leadership on school effectiveness; and 3) to test for measurement invariance in structural equation model across two sample groups. This research was quantitative. The sample included 270 schools under the Office of Roi Et Primary Educational Service Area 2. The research instruments included a five point scale rating questionnaire. Structural equation model was implemented. The results showed that: (1)The structural equation model of instructional leadership of school administrators affecting school effectiveness was fitted with empirical data. (2) Instructional leadership had direct, indirect, and total effects on school effectiveness. (3) Measurement of invariance between new administrators and highly experienced administrators showed a non-significant chi-square statistic and good practical values, indicating a one-factor model for both groups.

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Keyword: Instructional leadership, School Effectiveness, Stucture Equation Model

Background and Importance of the Problem

The effectiveness of Thai schools is usually evaluated by national as well as international evaluations. For instance, the new Program for International Student Assessment (PISA), education indicators of the United Nation Development Program (UNDP), and evaluation by the Office for National Education Standards and

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Quality Assessment as well as the results of foundation education evaluation (O-Net) have shown that as a whole, Thai education still lacks competitive capacity at an international level and still has not achieved the goal of the 1999 National Education Act and the Amendment Version 2002. Schools are the most important minor unit that will raise the educational quality towards international goals. Hoy and Miskel (2001) said that schools with capacity in this respect are effective schools, which teach high-achieving students. They are capable of developing students who have positive attitudes and who can adjust to stressful environment and can solve problems arising at school. Research studies on school effectiveness from the 1980s until today (Hallinger and Murphy, 1985; Hallinger and Heck, 1996; Southworth, 2002; Hallinger, 2003; Leithwood, Day, Sammons, Harris, & Hopkins, 2006, Lyons, 2010, Packard, 2011) show that the major factor affecting school effectiveness is the strength of the instructional leadership of school administrators who are involved with curriculum and instruction. Studies on the cause and effect relationships and relationships between instructional leadership of school administrators and school effectiveness are not widely conducted in Thailand. The researchers therefore, saw the importance in developing a model for causal relationship in order to test the validity and fitness of the model with empirical data, studying effects of variables, and testing for measurement invariance between different sample groups so that the model can be used as a means to develop educational effectiveness in the future.

Objectives of the Study

1) to validate fitness of structural equation model of instructional leadership affecting school effectiveness with empirical data.
2) to study direct, indirect, and total effect of instructional leadership on school effectiveness.
3) to test for measurement invariance of structural equation model across two sample groups.

Methodology

This research applied a quantitative research methodology focusing on cause-effect relationships in 2 phases:

Phase 1 - Study of relevant theories and research in order to develop a hypothetical structural equation model

Phase 2 – Statistically analyze the structural equation model (SEM)

1. Population and sample group

The population consisted of the 339 schools affiliated with the Office of Roi Et Primary Educational Service Area 2. The sample group was composed of 270 schools sampled by stratified random sampling.

2. Research instrument

The instrument used was a 5-point rating scale questionnaire. The alpha coefficient of each aspect in the questionnaire was 0.807- 0.890. Structural linearity was found by a confirmatory factor analysis.

3. Data analysis

3.1 Descriptive statistics were used to analyze data frequencies, percentages, means, standard deviations, kurtosis and skewness.

3.2 Referential statistics were used to perform factor analysis and fitness of structural equation modelling with evident data. Model invariance was then tested.

Conclusion and Discussion

Conclusion

1. The result of testing of fitness of instructional leadership structural equation model on school effectiveness

The structural equation model for instructional leadership affecting school effectiveness was found to fit the empirical data at a good level (X^2= 5.861, df=4, P-Value= 0.209, RMSEA=0.042, CFI=0.998, TLI=0.992, SRMR=0.013, X^2/df<2). These values met the criteria set, indicating that the model correlated to the empirical data according to the acceptance levels as shown in Figure 1.

2. The result of direct, indirect, and total effects of instruction leadership on school effectiveness

2.1 Direct effect – Three factors of instructional leadership found to have direct effect on school effectiveness, listed from high to low, are: creating of learning climate, professional development and curriculum and instructional development.

2.2 Indirect effect - Three factors of instructional leadership found to have indirect effect on school effectiveness, with direct influential coefficients from high to low, are: educational supervision, professional development, and creating of learning climate.

2.3 Total effects - Four factors of instructional leadership found to have total effects on school effectiveness, with total influential coefficients from high to low, are: professional development, educational supervision, creating of learning climate, and curriculum and instructional development.

3. The result of the test for measurement invariance of the structure equation model between new administrators and high-experience administrators

The test for measurement invariance of structural equation model to test the base-line invariance between the new administrators (with 0-10 years of experiences) and highly experienced administrators (over 11 years of experiences) showed that the model did not vary if the sample groups were different as shown in Figure 2.

Discussion

From the study of structural equation model of instructional leadership of school administrators affecting school effectiveness, the researchers found the following important issues that need to be elaborated: 1) the influential route and size of causative variables that affect school effectiveness and 2) invariance of the structural model in different sample groups. Professional development was the causative variable shown to have the highest total effect on school effectiveness both directly and indirectly. Indirect effects occurred through curriculum and instructional development and creation of learning climates. Professional development was shown to have the highest total effect because the planning for development and promotion of professional progress, promotion of action research and promotion of life-long learning for teachers bring positive impact on school effectiveness- students' achievement. All of these correlate with the finding of Mckensey (2007), that highly successful schools around the world have teachers with high capacity. Thus, the heart of learning reform lies in teacher development.

Clever, competent, and high-spirited personnel should be drawn into the teacher training process. Guskey (1986 cited in Evans, 2010) mentioned that professional development is a systematic approach that will change instruction of all systems based on the teachers' beliefs and attitudes towards classroom instruction. Studies by Cohen & Hill, 2000; Ferguson, 1991; Rosenholtz, 1989; Wenglinski, 2000 (cited in Addison, 2007) showed that students taught by teachers who have been trained professionally achieve more than students taught by teachers who have not been trained in the profession.

Educational supervision is a causative variable receiving the highest indirect effect on school effectiveness through 4 channels. This indicates that educational supervision is vital for raising the effectiveness of schools. It is a process that assists in the adjustment of teaching paradigms and hence results in teacher development in all aspects, leading in turn to good outcomes or high learner achievement. This correlates with Glickman, Gordon & Ross-Gordon (2006) which said that educational supervision is the function of school administrators to improve instruction for teachers in curriculum development, staff development, group development, and classroom action research. It also correlates with Blasé and Blasé, 1998; Blasé and Robert, 1994 (Cited in Lineburg, 2010) who said that supervision of teachers' instruction by administrators has a high impact on instruction. A study by Wolfrom (2009) showed that school administrators' supervision can indicate needs of teachers more clearly and can enhance professional development.

Creation of learning climates is the causative variable having the highest direct effect on school effectiveness and indirect effect on curriculum and instructional development. This finding showed that good creation of learning climates, including both the environment and co-living culture makes an organization effective. Freiberg (1998, cited in Thanyaporn, 2011) said that school climate enhances teaching and learning bringing about school reform. Multiple factors of school and classroom climate build an environment that enables

all members in the school to reach a good level of learning achievement. This correlates with the findings of Marten (2012), which revealed that the learning achievement of students is affected by appropriate atmosphere in teaching and learning in School; most students can develop and retain their achievements. School climate is important for students in terms of education, social, emotion, and moral and physical development. Students who feel safe, are taken care of by adults, and have good friends will be respectful and have a sense of belonging to the school. They will participate in maintaining and creating a good school climate. Additionally, a good learning atmosphere in schools also build good relationships between the school and the community as shown in Communtzis-Page (1996 cited in Crites, 2008), which showed that the community will not cooperate with the school if community members do not feel welcomed by the school climate. These people need to be respected, trusted and wanted. This research suggested that linking of school atmosphere with parents and community participation is related to students' education. When a school creates a positive climate and invites others by preparing the structure that opens for external participation, the outcome is school effectiveness.

Additionally, the research findings showed that curriculum and instruction development has the least total effect on school effectiveness. Most administrators lack knowledge and understanding in implementing the principles of the national core curriculum into the school's curriculum, learning activity plan, and classroom evaluation. Blasé & Blasé,1999; Fullan, 2001; Kouzes & Posner, 2002; Lashway, 2003; Prestine &Nelson, 2003 (Cited in Lyons, 2010) concluded that administrators as leaders in curriculum and instruction need to develop themselves intensively and become prototypes for their personnel. Administrators have to be eager in professional development. However, the curriculum and instructional development variable still showed the linear influential coefficient of 0.033 at a statistically significant level of 0.05. This suggests that school effectiveness is affected by curriculum and instructional development. According to the studies by Lyons (2010), Lineburg (2010), and Mosenthal, Lipson, Torncello, Russ, and Mekkelsen (2004) can be concluded that the factor behind the success of schools especially in learner achievement and excellence is learner-centered curriculum and instruction development because this factor affects school effectiveness directly.

Finally, the testing of measurement invariance of the model by analysis of multi-group models between new administrators and high-experiences administrators showed that the model structure did not change. The statistics of multiple models also correlated and fit with the empirical data at a good level. This finding indicates that the structure equation model of instructional leadership that affects school effectiveness can be used for two different groups. This can be explained by the study by Taciano and Fischer (2010) who tested the invariance between groups in cross cultural research. The result would be satisfactory if the structure of the model did not change between the groups. It can be explained that informants of each group of population hold the same concept in building the structure.

Recommendations

1. Recommendations for application of the findings

1.1 From testing the fitness of the model with empirical data, this study suggests that the four characteristics of instructional leadership of administrators are very important for school effectiveness. Therefore, policy administrators should set integrated policies to develop instructional leadership for administrators in the four aspects because school effectiveness can be achieved directly or indirectly from instructional leadership.

1.2 The analysis of total effects of instructional leadership on school effectiveness showed that professional development had the highest total effects. Thus, administrators at all levels should see the importance of teachers' professional development by planning systematic teacher professional development, promoting and supporting teachers in training and continuing education, and strengthening teachers' networks.

2. Recommendations for further research

2.1 From the findings and the studied theories in the course of this research, it has been shown that professional development is an extremely important variable in the increase of school effectiveness. Hence, studies should be conducted on models for teacher professional development to support the Office of Foundation Education and Teacher Training Organizations to prepare teachers appropriately.

2.2 The educational scope should be expanded through studies of multi-level models in order to consider models at individual, organizational, or education service area levels.

Explanation
SUP: Educational Supervision
CUR: Curriculum and Instructional Development
PRO: Professional Development
CLI: Creation of Learning Climate
EFF: School Effectiveness
STUACH: School Effectiveness in term of Product
SATCOM: School Effectiveness in term of Process

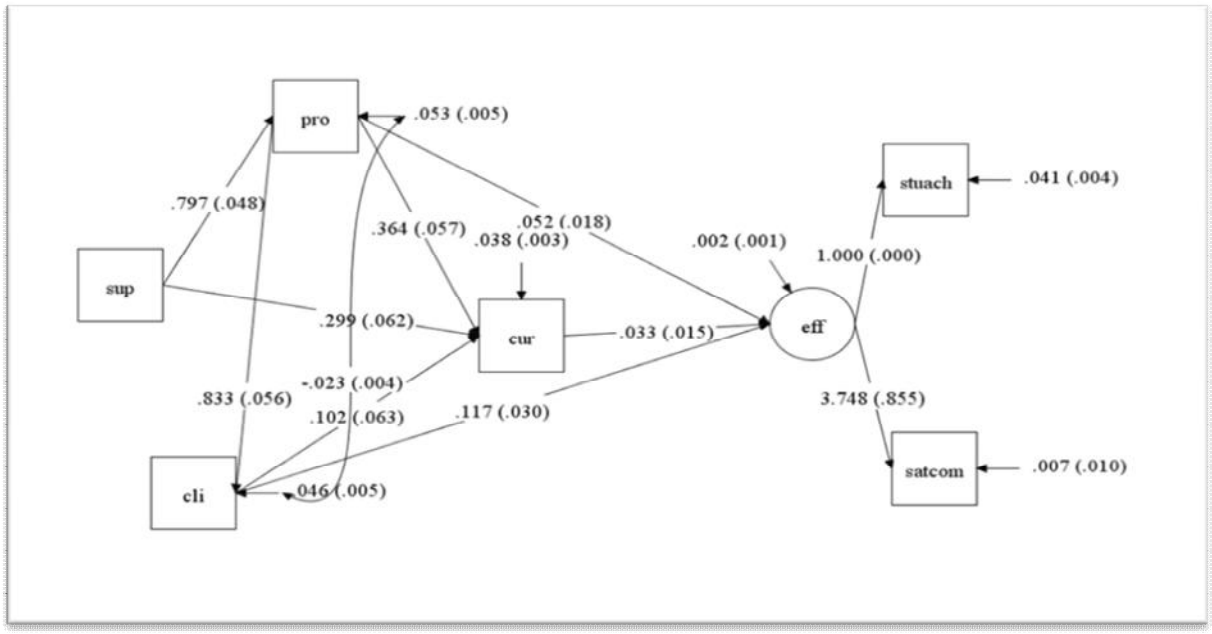

Figure 1 Results of the testing of fitness of the structural equation model affecting instructional leadership of school administrators on school effectiveness

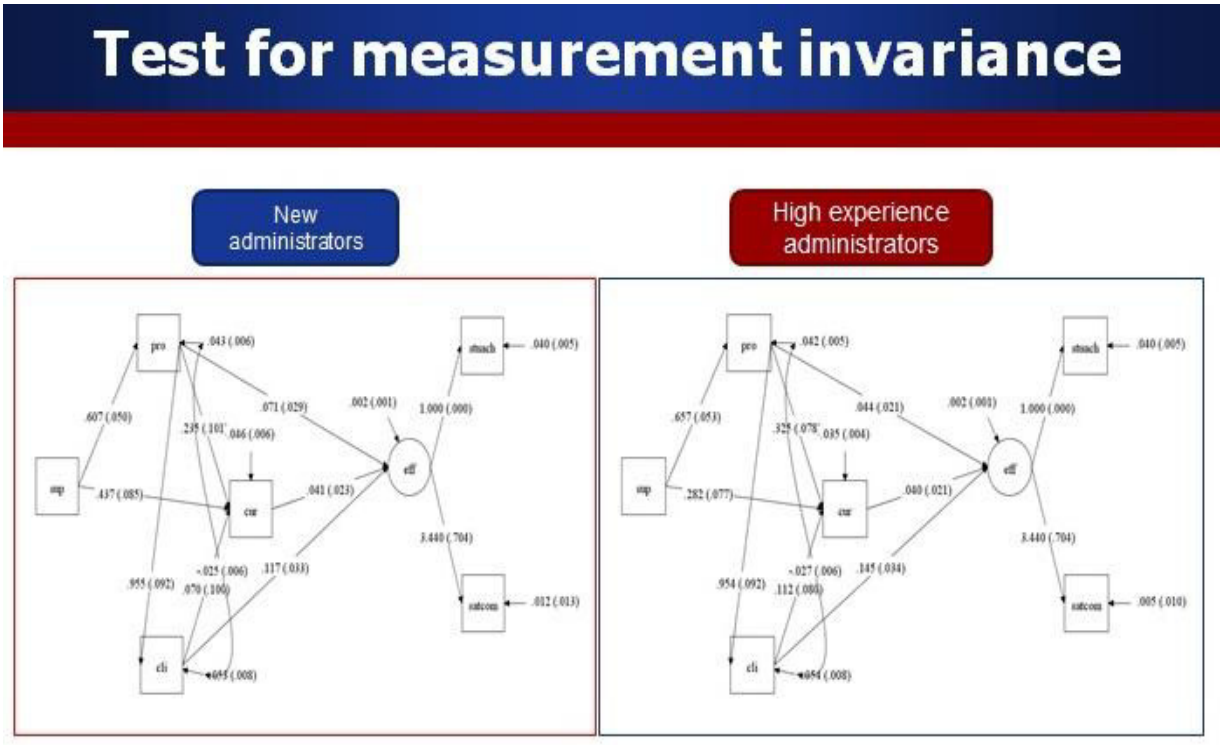

Figure 2 Test of measurement invariance of structural equation model between new administrators and highly experienced administrators

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